

In the Claims:

Please cancel claims 1-5 without prejudice or disfavor and replace with the following new claims.

6. An isolated and purified DNA molecule comprising a base sequence for a polypeptide obtained from an organism selected from the group consisting of *Phaffia rhodozyma* and *Haematococcus pluvialis*, said polypeptide having an enzyme activity of ^{isopentenyl pyrophosphate} ~~IPP~~ isomerase.

7. An isolated and purified DNA molecule encoding the *Phaffia rhodozyma* ^{isopentenyl pyrophosphate} ~~IPP~~ isomerase set forth in SEQ ID NO.1.

8. An isolated and purified DNA molecule encoding the *Haematococcus pluvialis* ^{isopentenyl pyrophosphate} ~~IPP~~ isomerase set forth in SEQ ID NO.2.

9. A method for producing carotenoids comprising introducing the DNA molecule described in any one of claims 6, 7, and 8 into a carotenoids – producing microorganism, culturing said transformed microorganism and obtaining carotenoids in the culture broth and cells.

10. A method for producing carotenoids comprising introducing a DNA molecule containing a nucleotide sequence which encodes a polypeptide having the amino acid sequence set forth in SEQ ID NO.3 into a carotenoids producing microorganism, culturing said transformed microorganism and obtaining carotenoids in the culture broth and cells.

Remarks

Claims 1-5 are pending and have been rejected based on U.S.C. 101, 112 second paragraph, 112 first paragraph and 102. Applicants provide new claims that recite